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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/614,725 | 07/12/2000 | Masami Kidono | 000871 | 3259 |

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| EXAMINER |
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GENCO, BRIAN C

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| ART UNIT | PAPER NUMBER |
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2615

DATE MAILED: 06/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/614,725

Applicant(s)

KIDONO ET AL.

Examiner

Brian C Genco

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Applicant's amendment filed March 24, 2004 has been fully considered by the Examiner but is not deemed persuasive.

Examiner thanks Applicant for amending the title as suggested and as such the objection to the specification is herein withdrawn.

Applicant's traversal of the Drawing objection previously presented is unsuccessful. Applicant argues that the limitations of said correction reference signal generation means performs different types of correction reference signal generation processing in generating the reference signal, corresponding to the plurality of drive modes as claimed in claim 1 and the limitation of an n-addition drive mode of claims 2, and 5-7 is shown in the drawings of Fig. 1 through elements 6 and 8.

Examiner notes that while these elements generally shown can be operated in different manners given different control signals supplied through element 12, the details of the limitations are not shown, namely the correspondence between the different types of correction reference signal generation processing and the plurality of drive modes of the image sensor. As such, new drawings must be added showing the above correspondence in order to overcome the objection.

Applicant's arguments over the rejection previously presented are moot in view of new grounds of rejection presented bellow.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitation that said correction reference signal generation means performs different types of correction reference signal generation processing in generating the reference signal, corresponding to the plurality of drive modes as claimed in claim 1 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Similarly the limitation said correction reference signal generation means referring an address information relating to defective pixels in the vertical optical black pixel portion of the image pickup device must be shown or the feature(s) canceled from the claim(s).

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 4, 6, and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over (USPN 6,084,634 to Inagaki et al.) in view of (USPN 6,396,539 to Heller et al.).

In regards to claim 1 Inagaki et al., herein Inagaki, discloses an image pickup apparatus comprising:

an image pickup device (e.g., element 4 of Fig. 13);

correction reference signal generation means for generating a correction reference signal from output signals of a vertical optical black pixel portion of the image pickup device, for correcting effective image signals outputted as signal of an effective pixel portion of said image pickup device (e.g., element 701 of Fig. 14; column 17, lines 10-25 and 36-59);

image signal correction means for subtracting said correction reference signal from said effective image signals (e.g., element 402; Examiner notes that the subtraction is inherent in the level shifter); and

image pickup device drive means having a plurality of drive modes for driving said image pickup device to read pixel charge as an output signal (e.g., still photography and view finder modes);

wherein said correction reference signal generation means performing different types of correction reference signal generation processing in generating the reference signal, corresponding to the plurality of drive modes of said image pickup device drive means (e.g., column 20, line 61 – column 21, line 4).

Inagaki does not disclose nor preclude referring an address information relating to defective pixels in the vertical optical black pixel portion of the image pickup device.

It is known in the art to store defective pixel locations in a memory such that those locations can be corrected upon reading out an image as disclosed by Heller (column 7, lines 49-57; column 8, lines 21-26 and 39-65; Figs. 5 and 6). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have referred to address information relating to defective pixels in order to correct the defective pixels.

In regards to claim 4 see Examiner's notes on the rejection of claim 1.

In regards to claim 6 the dynamic image taking mode is the view finder mode and the still image taking mode is the still photography mode.

In regards to claim 7 see Fig. 15.

In regards to claim 8 see Examiners notes on the rejections above.

In regards to claim 9 Examiner notes that Heller discloses the defective pixel information is stored in a non-volatile flash memory or fuse programmable memory (column 8, lines 29-38).

Applicant cannot rely upon the foreign priority papers to overcome Inagaki as a 35 U.S.C. 102(a) rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Claims 1, 4, 6, and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over (JP 09-135388 to Inagaki et al.) in view of (USPN 6,396,539 to Heller et al.).

In regards to claims 1, 4, 6, and 7-9 Examiner notes that JP 09-135388 is an equivalent document as USPN 6,084,634, wherein the same rejections made above are herein reiterated for this rejection. Examiner is using USPN 6,084,634 as a translation of JP 09-135388.

Claims 2, 3, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over (USPN 6,084,634 to Inagaki et al.) in view of (USPN 6,396,539 to Heller et al.) in view of (Applicant's admitted prior art).

In regards to claim 2 Inagaki does not disclose an n-addition drive mode, instead Inagaki discloses reading out one out of ever four rows and lines as depicted in Figs. 4(A) and 4(B). Applicant's admitted prior art discloses that an n-addition drive mode is advantageous for

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outputting at high speed a low resolution image with high sensitivity (page 3, paragraph 1).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have made Inagaki's thinning in the view finder mode an n-addition drive mode so as to output at high speed a low resolution image with high sensitivity.

In regards to claim 3 see column 17, lines 36-44.

In regards to claim 5 see Examiners notes on the rejection of claims 2 and 6. See Fig. 3 and column 11, lines 11-24.

Claims 1, 4, 6, and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over (JP 09-135388 to Inagaki et al.) in view of (USPN 6,396,539 to Heller et al.) in view of (USPN 6,160,578 to Carroll et al.).

In regards to claims 1, 4, 6, and 7, assuming arguendo that the subtraction is not inherent with the level shifter of Inagaki's invention Examiner notes the disclosure of Carroll et al., herein Carroll, wherein it is disclosed that an optical black signal is feed back so as to subtract the black level from the video signal with a DC offset signal so that the A/D converters are in the right digitizing range (e.g., column 13, lines 10-24). Examiner notes that in Inagaki's disclosure it is taught to shift the DC level of the input so as to supply the input to the A/D converters in a proper dynamic range, namely so that the optical black level is coincident with a lower limit of the A/D converters (column 17, lines 12-18). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have subtracted the black level from the video signal in the level shifter in order to obtain Inagaki's stated objective of ensuring the

optical black level is coincident with a lower limit of the A/D converters. Examiner notes that the rest of the rejection of claims 1, 4, 6, and 7 can be made as indicated in the rejections above.

Claims 2, 3, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over (JP 09-135388 to Inagaki et al.) in view of (USPN 6,396,539 to Heller et al.) in view of (USPN 6,160,578 to Carroll et al.) in view of (Applicant's admitted prior art).

In continuing the *arguendo* mentioned above, the rejection for claims 2, 3, and 5 made previously are similarly made here.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian C. Genco who can be reached by phone at 703-305-7881 or by fax at 703-746-8325. The examiner can normally be reached on Monday thru Friday 8:30am to 4:30 pm.

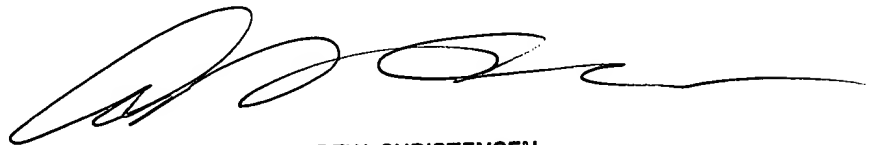
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Christensen can be reached on 703-308-9644. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is 703-308-4357.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brian C Genco
Examiner
Art Unit 2615

June 14, 2004



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